

### **AMENDMENTS TO THE CLAIMS**

The listing of claims below replaces all prior versions of claims in the application.

1. (Currently Amended): A heat-resistant diamond composite sintered body, comprising:  
a diamond crystal and a non-diamond carbon formed by graphitization of part of diamond  
powder, wherein said diamond composite sintered body does not contain any sintering aid,  
wherein said diamond composite sintered body is prepared by sintering an ultrafine-grain  
synthetic diamond powder having an average grain size of 200 nm or less, by use of an ultrahigh-  
pressure synthesizing apparatus through static compression process without using a sintering aid,  
said composite sintered body ~~comprising a diamond crystal and a minute amount of non-~~  
~~diamond carbon as a product, and~~ having a Vickers hardness of 85 GPa or more.

2. (Currently Amended): A method of producing the heat-resistant diamond composite  
sintered body as defined in claim 1, comprising:

enclosing a synthetic diamond powder with no sintering aid in a capsule made of  
Ta or Mo, said synthetic diamond powder having an average grain size of 200 nm or less, ~~in a~~  
~~capsule made of Ta or Mo;~~

placing the capsule in a pressure medium; and

heating and pressurizing the capsule under thermodynamically stable conditions  
~~including~~ of a temperature of 2100°C or more and a pressure of 7.7 GPa or more, by use of an  
ultrahigh-pressure synthesizing apparatus through static compression process.